Insights into Brain and CNS Tumor Epidemiology Among the Chronologically Advanced in the US Population

TA Dolecek,1,2, BJ McCarthy,1,2, JM Propp1, N Stroup1, C Kruchko1
Central Brain Tumor Registry of the United States (CBTRUS)1, Hinsdale, Illinois
University of Illinois at Chicago2, Chicago, Illinois

Introduction

On January 1st 2011 and every single day over the next 19 years more than 10,000 Baby Boomers have reached or will reach the age of 60, a fact that highlights the aging of the US population. This population trend will have a profound impact on disease patterns including those involving brain and CNS tumor incidence and survival prompting this study.

Methods

The sample consisted of cases diagnosed with brain and CNS tumors (C70.0-C72.9, C75.1-C75.3) in the Central Brain Tumor Registry of the United States (CBTRUS)1 21 state population-based registries analytic data set, 2004-2008 (n=110,045; n=49,121 (60+ years)) and the Surveillance Epidemiology End Results Program (SEER)13 registry research data file, 1992-2009 (n=26,633 (80+ years)). Incidence rates of malignant and non-malignant tumors were compared and contrasted for six age groups using CBTRUS. Trends and survival among those 60+ years were examined for malignant tumors using SEER. Analyses were conducted using SEER*Stat v. 7.0.9.

Results

Incidence rates for all combined, malignant, and non-malignant tumors progressively increased with each advancing age group with the exception of malignant rates not being significantly different between age categories 70-79 and 80+ years (Figure 1).

The incidence of meningioma progressively increased with advancing age, while the incidence of other selected histologies decreased in the 80+ group (Figure 2).

Survival was poorest in the 80+ year category which is of importance given the increasing incidence trend for the respective group (Figure 5).

Conclusion

Increases in the incidence in the oldest age group (80+ years) will require attention to approaches needed to treat and care for those diagnosed with brain and CNS tumors in this population subgroup.

Table 1. Average Annual Age-adjusted Incidence Rates for Brain and Central Nervous System Tumors Among Selected Age Groups in the Chronologically Advanced Populations CBTRUS 21 State Registry Data File, 2004-2008

<table>
<thead>
<tr>
<th>Age Group</th>
<th>60-69 Years</th>
<th>70-79 Years</th>
<th>80+ Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>Rate (%)</td>
<td>Rate (%)</td>
<td>Rate (%)</td>
</tr>
<tr>
<td>Male</td>
<td>3,950</td>
<td>42.8-52.6</td>
<td>47.7-63.5</td>
</tr>
<tr>
<td>Female</td>
<td>7,927</td>
<td>65.8-68.6</td>
<td>69.4-81.6</td>
</tr>
</tbody>
</table>

Incidence rates for the age groups of interest were highest among whites followed by blacks and lowest for other races with the exception of black females ages 60-69 and were higher for females than males within every race group (Table 1).

Acknowledgements

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